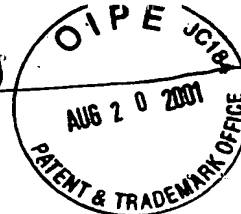


SEQUENCE LISTING



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Taupier Jr, Raymond J
Bandaru, Raj

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Gln Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln
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Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
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Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
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Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
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Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
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<220>
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<210> 11
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<210> 12
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 <210> 17
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 <210> 19
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<210> 21
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 <220>
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 <210> 22
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 Primer Sequence

 <400> 22
 cccgagcagc cgaacggc 18

 <210> 23
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV2 S8 PCR
 Primer Sequence

 <400> 23
 gccgttcggc tgctcggg 18

 <210> 24
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV3 Forward
 PCR Primer Sequence

 <400> 24
 ggatccacca cctgcccctc ggtgtgc 27

 <210> 25
 <211> 35
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV3 Reverse
 PCR Primer Sequence

 <400> 25

ctcgaggcca gcgttctgct cctgggttgag tgtgg

35

<210> 26

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: NOV3 S1 PCR
Primer Sequence

<400> 26

cgcaccattg ccagggac

18

<210> 27

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: NOV3 S2 PCR
Primer Sequence

<400> 27

gtccctggca atggtgcg

18

<210> 28

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: NOV3 S3 PCR
Primer Sequence

<400> 28

ctggtgcgca attcgctggc c

21

<210> 29

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: NOV3 S4 PCR
Primer Sequence

<400> 29

ggccagcgaa ttgcgcacca g

21

<210> 30

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: NOV3 S5 PCR
Primer Sequence

<400> 30
cacgcctctg ccaccacg 18

<210> 31
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S6 PCR
Primer Sequence

<400> 31
cgtggtggca gaggcgtg 18

<210> 32
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: pSec-V5 His
Forward Oligonucleotide Primer Sequence

<400> 32
ctcgtcctcg aggtaagcc tatccctaac 30

<210> 33
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: pSec-V5 His
Reverse Oligonucleotide Primer Sequence .

<400> 33
ctcgtcgggc ccctgatcag cgggtttaa c 31

<210> 34
<211> 40
<212> PRT
<213> Homo sapiens

<400> 34
Met Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala
1 5 10 15

Lys Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys
20 25 30

Glu Thr Ile Glu Gln Glu Lys Arg
35 40

<210> 35
<211> 10
<212> PRT

<213> Homo sapiens

<400> 35

Lys Leu Lys Lys Thr Glu Thr Gln Glu Asn
1 5 10

<210> 36

<211> 38

<212> PRT

<213> Homo sapiens

<400> 36

Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys
35

<210> 37

<211> 40

<212> PRT

<213> Bos taurus

<400> 37

Ala Asp Lys Pro Asp Leu Gly Glu Ile Asn Ser Phe Asp Lys Ala Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
35 40

<210> 38

<211> 40

<212> PRT

<213> Sus scrofa

<400> 38

Ala Asp Lys Pro Asp Met Gly Glu Ile Asn Ser Phe Asp Lys Ala Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
35 40

<210> 39

<211> 40

<212> PRT

<213> Homo sapiens

<400> 39

Ser Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
 20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 40
 <211> 41
 <212> PRT
 <213> Mus musculus

<400> 40
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 1 5 10 15

Lys Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys
 20 25 30

Glu Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 41
 <211> 40
 <212> PRT
 <213> Oryctolagus cuniculus

<400> 41
 Ala Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys
 1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
 20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 42
 <211> 39
 <212> PRT
 <213> Xenopus laevis

<400> 42
 Ser Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ala Lys
 1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
 20 25 30

Thr Ile Glu Gln Glu Lys Gln
 35

<210> 43
 <211> 40
 <212> PRT
 <213> Homo sapiens

<400> 43
 Ser Asp Lys Pro Gly Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys

Met Ser Asp Lys Pro Asp Leu Ser Glu Val Glu Thr Phe Asp Lys Ser
1 5 10 15

Lys Leu Lys Lys Thr Asn Thr Glu Glu Lys Asn Thr Leu Pro Ser Lys
20 25 30

Glu Thr Ile Gln Gln Glu Lys
35

<210> 48

<211> 38

<212> PRT

<213> Homo sapiens

<400> 48

Ser Asp Lys Pro Asp Leu Ser Glu Val Glu Lys Phe Asp Arg Ser Lys
1 5 10 15

Leu Lys Lys Thr Asn Thr Glu Glu Lys Asn Thr Leu Pro Ser Lys Glu
20 25 30

Thr Ile Gln Gln Glu Lys
35

<210> 49

<211> 35

<212> PRT

<213> Drosophila melanogaster

<400> 49

Ile Ala Gly Ile Glu Asn Phe Asp Ala Lys Lys Leu Lys His Thr Glu
1 5 10 15

Thr Asn Glu Lys Asn Val Leu Pro Thr Lys Glu Val Ile Glu Ala Glu
20 25 30

Lys Gln Ala
35

<210> 50

<211> 31

<212> PRT

<213> Drosophila melanogaster

<400> 50

Gly Ile Thr Ala Phe Asn Gln Asn Asn Leu Lys His Thr Glu Thr Asn
1 5 10 15

Glu Lys Asn Pro Leu Pro Asp Lys Glu Ala Ile Glu Gln Glu Lys
20 25 30

<210> 51

<211> 38

<212> PRT

<213> Homo sapiens

<400> 51

Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys
35

<210> 52

<211> 991

<212> PRT

<213> Mus musculus

<400> 52

Met Ala Pro Ala Arg Ala Arg Leu Ser Pro Ala Leu Trp Val Val Thr
1 5 10 15

Ala Ala Ala Ala Thr Cys Val Ser Ala Gly Arg Gly Glu Val Asn
20 25 30

Leu Leu Asp Thr Ser Thr Ile His Gly Asp Trp Gly Trp Leu Thr Tyr
35 40 45

Pro Ala His Gly Trp Asp Ser Ile Asn Glu Val Asp Glu Ser Phe Arg
50 55 60

Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln Asn
65 70 75 80

Asn Trp Leu Arg Thr Asn Trp Val Pro Arg Asp Gly Ala Arg Arg Val
85 90 95

Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Ile Pro Gly
100 105 110

Val Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu His Tyr Leu Glu Ser
115 120 125

Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu Ser Gln Phe Leu Lys Ile
130 135 140

Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gly Ala Asp Leu Gly Val
145 150 155 160

Arg Arg Leu Lys Leu Asn Thr Glu Val Arg Gly Val Gly Pro Leu Ser
165 170 175

Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Leu Ala
180 185 190

Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys Cys Pro Ala Met Val Arg
195 200 205

Asn Leu Ala Ala Phe Ser Glu Ala Val Thr Gly Ala Asp Ser Ser Ser
210 215 220

Leu Val Glu Val Arg Gly Gln Cys Val Arg His Ser Glu Glu Arg Asp
225 230 235 240

Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro Ile
245 250 255

Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala Cys
19

260										265										270										
Met	Ala	Cys	Glu	Leu	Gly	Phe	Tyr	Lys	Ser	Ala	Pro	Gly	Asp	Gln	Leu															
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Cys	Ala	Arg	Cys	Pro	Pro	His	Ser	His	Ser	Ala	Thr	Pro	Ala	Ala	Gln															
		290				295					300																			
Thr	Cys	Arg	Cys	Asp	Leu	Ser	Tyr	Tyr	Arg	Ala	Ala	Leu	Asp	Pro	Pro															
					310					315					320															
Ser	Ala	Ala	Cys	Thr	Arg	Pro	Pro	Ser	Ala	Pro	Val	Asn	Leu	Ile	Ser															
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Ser	Val	Asn	Gly	Thr	Ser	Val	Thr	Leu	Glu	Trp	Ala	Pro	Pro	Leu	Asp															
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Pro	Gly	Gly	Arg	Ser	Asp	Ile	Thr	Tyr	Asn	Ala	Val	Cys	Arg	Arg	Cys															
		355				360						365																		
Pro	Trp	Ala	Leu	Ser	His	Cys	Glu	Ala	Cys	Gly	Ser	Gly	Thr	Arg	Phe															
		370				375					380																			
Val	Pro	Gln	Gln	Thr	Ser	Leu	Ala	Gln	Ala	Ser	Leu	Leu	Val	Ala	Asn															
		385			390					395					400															
Leu	Leu	Ala	His	Met	Asn	Tyr	Ser	Phe	Trp	Ile	Glu	Ala	Val	Asn	Gly															
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Val	Ser	Asn	Leu	Ser	Pro	Glu	Pro	Arg	Ser	Ala	Ala	Val	Val	Asn	Ile															
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Thr	Thr	Asn	Gln	Ala	Ala	Pro	Ser	Gln	Val	Val	Val	Ile	Arg	Gln	Glu															
		435				440						445																		
Arg	Ala	Gly	Gln	Thr	Ser	Val	Ser	Leu	Leu	Trp	Gln	Glu	Pro	Glu	Gln															
		450			455					460																				
Pro	Asn	Gly	Ile	Ile	Leu	Glu	Tyr	Glu	Ile	Lys	Tyr	Tyr	Glu	Lys	Asp															
		465			470					475				480																
Lys	Glu	Met	Gln	Ser	Tyr	Ser	Thr	Leu	Lys	Ala	Val	Thr	Thr	Arg	Ala															
				485				490					495																	
Thr	Val	Ser	Gly	Leu	Lys	Pro	Gly	Thr	Arg	Tyr	Val	Phe	Gln	Val	Arg															
			500					505				510																		
Ala	Arg	Thr	Ser	Ala	Gly	Cys	Gly	Arg	Phe	Ser	Gln	Ala	Met	Glu	Val															
		515				520						525																		
Glu	Thr	Gly	Lys	Pro	Arg	Pro	Arg	Tyr	Asp	Thr	Arg	Thr	Ile	Val	Trp															
		530				535					540																			
Ile	Cys	Leu	Thr	Leu	Ile	Thr	Gly	Leu	Val	Val	Leu	Leu	Leu	Leu	Leu															
		545			550					555				560																
Ile	Cys	Lys	Lys	Arg	His	Cys	Gly	Tyr	Ser	Lys	Ala	Phe	Gln	Asp	Ser															
				565				570					575																	
Asp	Glu	Glu	Lys	Met	His	Tyr	Gln	Asn	Gly	Gln	Ala	Pro	Pro	Pro	Val															
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Phe	Leu	Pro	Leu	Asn	His	Pro	Pro	Gly	Lys	Phe	Pro	Glu	Thr	Gln	Phe															

595					600					605					
Ser	Ala	Glu	Pro	His	Thr	Tyr	Glu	Glu	Pro	Gly	Arg	Ala	Gly	Arg	Ser
610						615					620				
Phe	Thr	Arg	Glu	Ile	Glu	Ala	Ser	Arg	Ile	His	Ile	Glu	Lys	Ile	Ile
625					630					635					640
Gly	Ser	Gly	Glu	Ser	Gly	Glu	Val	Cys	Tyr	Gly	Arg	Leu	Gln	Val	Pro
				645					650					655	
Gly	Gln	Arg	Asp	Val	Pro	Val	Ala	Ile	Lys	Ala	Leu	Lys	Ala	Gly	Tyr
			660					665					670		
Thr	Glu	Arg	Gln	Arg	Gln	Asp	Phe	Leu	Ser	Glu	Ala	Ala	Ile	Met	Gly
		675					680						685		
Gln	Phe	Asp	His	Pro	Asn	Ile	Ile	Arg	Leu	Glu	Gly	Val	Val	Thr	Arg
	690					695					700				
Gly	Arg	Leu	Ala	Met	Ile	Val	Thr	Glu	Tyr	Met	Glu	Asn	Gly	Ser	Leu
705					710					715					720
Asp	Ala	Phe	Leu	Arg	Thr	His	Asp	Gly	Gln	Phe	Thr	Ile	Val	Gln	Leu
				725					730					735	
Val	Gly	Met	Leu	Arg	Gly	Val	Gly	Ala	Gly	Met	Arg	Tyr	Leu	Ser	Asp
			740					745					750		
Leu	Gly	Tyr	Ile	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Val	Leu	Val	Asp
		755					760					765			
Gly	Arg	Leu	Val	Cys	Lys	Val	Ser	Asp	Phe	Gly	Leu	Ser	Arg	Ala	Leu
	770					775					780				
Glu	Asp	Asp	Pro	Glu	Ala	Ala	Tyr	Thr	Thr	Ala	Gly	Gly	Lys	Ile	Pro
785					790					795					800
Ile	Arg	Trp	Thr	Ala	Pro	Glu	Ala	Ile	Ala	Phe	Arg	Thr	Phe	Ser	Ser
				805					810					815	
Ala	Ser	Asp	Val	Trp	Ser	Phe	Gly	Val	Val	Met	Trp	Glu	Val	Leu	Ala
			820					825					830		
Tyr	Gly	Glu	Arg	Pro	Tyr	Trp	Asn	Met	Thr	Asn	Gln	Asp	Val	Ile	Ser
	835						840					845			
Ser	Val	Glu	Glu	Gly	Tyr	Arg	Leu	Pro	Ala	Pro	Met	Gly	Cys	Pro	Arg
	850					855					860				
Ala	Leu	His	Gln	Leu	Met	Leu	Asp	Cys	Trp	His	Lys	Asp	Arg	Ala	Gln
865					870					875					880
Arg	Pro	Arg	Phe	Ala	His	Val	Val	Ser	Val	Leu	Asp	Ala	Leu	Val	His
				885					890					895	
Ser	Pro	Glu	Ser	Leu	Arg	Ala	Thr	Ala	Thr	Val	Ser	Arg	Cys	Pro	Pro
			900					905					910		
Pro	Ala	Phe	Ala	Arg	Ser	Cys	Phe	Asp	Leu	Arg	Ala	Gly	Gly	Ser	Gly
		915					920					925			
Asn	Gly	Asp	Leu	Thr	Val	Gly	Asp	Trp	Leu	Asp	Ser	Ile	Arg	Met	Gly

930					935					940						
Arg	Tyr	Arg	Asp	His	Phe	Ala	Ala	Gly	Gly	Tyr	Ser	Ser	Leu	Gly	Met	
945					950					955					960	
Val	Leu	Arg	Met	Asn	Ala	Gln	Asp	Val	Arg	Ala	Leu	Gly	Ile	Thr	Leu	
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Met	Gly	His	Gln	Lys	Lys	Ile	Leu	Gly	Ser	Ile	Gln	Thr	Met	Arg		
			980					985					990			
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<211> 992																
<212> PRT																
<213> Homo sapiens																
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			20					25					30			
Asn	Leu	Leu	Asp	Thr	Ser	Thr	Ile	His	Gly	Asp	Trp	Gly	Trp	Leu	Thr	
		35					40					45				
Tyr	Pro	Ala	His	Gly	Trp	Asp	Ser	Ile	Asn	Glu	Val	Asp	Glu	Ser	Phe	
	50					55					60					
Gln	Pro	Ile	His	Thr	Tyr	Gln	Val	Cys	Asn	Val	Met	Ser	Pro	Asn	Gln	
65				70					75					80		
Asn	Asn	Trp	Leu	Arg	Thr	Ser	Trp	Val	Pro	Arg	Asp	Gly	Ala	Arg	Arg	
				85				90						95		
Val	Tyr	Ala	Glu	Ile	Lys	Phe	Thr	Leu	Arg	Asp	Cys	Asn	Ser	Met	Pro	
		100						105					110			
Gly	Val	Leu	Gly	Thr	Cys	Lys	Glu	Thr	Phe	Asn	Leu	Tyr	Tyr	Leu	Glu	
		115					120					125				
Ser	Asp	Arg	Asp	Leu	Gly	Ala	Ser	Thr	Gln	Glu	Ser	Gln	Phe	Leu	Lys	
	130					135					140					
Ile	Asp	Thr	Ile	Ala	Ala	Asp	Glu	Ser	Phe	Thr	Gly	Ala	Asp	Leu	Gly	
145				150							155			160		
Val	Arg	Arg	Leu	Lys	Leu	Asn	Thr	Glu	Val	Arg	Ser	Val	Gly	Pro	Leu	
			165					170						175		
Ser	Lys	Arg	Gly	Phe	Tyr	Leu	Ala	Phe	Gln	Asp	Ile	Gly	Ala	Cys	Leu	
			180					185					190			
Ala	Ile	Leu	Ser	Leu	Arg	Ile	Tyr	Tyr	Lys	Lys	Cys	Pro	Ala	Met	Val	
		195					200					205				
Arg	Asn	Leu	Ala	Ala	Phe	Ser	Glu	Ala	Val	Thr	Gly	Ala	Asp	Ser	Ser	
	210					215					220					
Ser	Leu	Val	Glu	Val	Arg	Gly	Gln	Cys	Val	Arg	His	Ser	Glu	Glu	Arg	
225				230					235					240		

Asp Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro
 245 250 255
 Ile Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala
 260 265 270
 Cys Val Ala Cys Glu Leu Gly Phe Tyr Lys Ser Ala Pro Gly Asp Gln
 275 280 285
 Leu Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Ala Pro Ala Ala
 290 295 300
 Gln Ala Cys His Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro
 305 310 315 320
 Pro Ser Ser Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile
 325 330 335
 Ser Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu
 340 345 350
 Asp Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn Ala Val Cys Arg Arg
 355 360 365
 Cys Pro Trp Ala Leu Ser Arg Cys Glu Ala Cys Gly Ser Gly Thr Arg
 370 375 380
 Phe Val Pro Gln Gln Thr Ser Leu Val Gln Ala Ser Leu Leu Val Ala
 385 390 395 400
 Asn Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn
 405 410 415
 Gly Val Ser Asp Leu Ser Pro Glu Pro Arg Arg Ala Ala Val Val Asn
 420 425 430
 Ile Thr Thr Asn Gln Ala Ala Pro Ser Gln Val Val Val Ile Arg Gln
 435 440 445
 Glu Arg Ala Gly Gln Thr Ser Val Ser Leu Leu Trp Gln Glu Pro Glu
 450 455 460
 Gln Pro Asn Gly Ile Ile Leu Glu Tyr Glu Ile Lys Tyr Tyr Glu Lys
 465 470 475 480
 Asp Lys Glu Met Gln Ser Tyr Ser Thr Leu Lys Ala Val Thr Thr Arg
 485 490 495
 Ala Thr Val Ser Gly Leu Lys Pro Gly Thr Arg Tyr Val Phe Gln Val
 500 505 510
 Arg Ala Arg Thr Ser Ala Gly Cys Gly Arg Phe Ser Gln Ala Met Glu
 515 520 525
 Val Glu Thr Gly Lys Pro Arg Pro Arg Tyr Asp Thr Arg Thr Ile Val
 530 535 540
 Trp Ile Cys Leu Thr Leu Ile Thr Gly Leu Val Val Leu Leu Leu Leu
 545 550 555 560
 Leu Ile Cys Lys Lys Arg His Cys Gly Tyr Ser Lys Ala Phe Gln Asp
 565 570 575

Ser Asp Glu Glu Lys Met His Tyr Gln Asn Gly Gln Ala Pro Pro Pro
 580 585 590
 Val Phe Leu Pro Leu His His Pro Pro Gly Lys Leu Pro Glu Pro Gln
 595 600 605
 Phe Tyr Ala Glu Pro His Thr Tyr Glu Glu Pro Gly Arg Ala Gly Arg
 610 615 620
 Ser Phe Thr Arg Glu Ile Glu Ala Ser Arg Ile His Ile Glu Lys Ile
 625 630 635 640
 Ile Gly Ser Gly Asp Ser Gly Glu Val Cys Tyr Gly Arg Leu Arg Val
 645 650 655
 Pro Gly Gln Arg Asp Val Pro Val Ala Ile Lys Ala Leu Lys Ala Gly
 660 665 670
 Tyr Thr Glu Arg Gln Arg Arg Asp Phe Leu Ser Glu Ala Ser Ile Met
 675 680 685
 Gly Gln Phe Asp His Pro Asn Ile Ile Arg Leu Glu Gly Val Val Thr
 690 695 700
 Arg Gly Arg Leu Ala Met Ile Val Thr Glu Tyr Met Glu Asn Gly Ser
 705 710 715 720
 Leu Asp Thr Phe Leu Arg Thr His Asp Gly Gln Phe Thr Ile Met Gln
 725 730 735
 Leu Val Gly Met Leu Arg Gly Val Gly Ala Gly Met Arg Tyr Leu Ser
 740 745 750
 Asp Leu Gly Tyr Val His Arg Asp Leu Ala Ala Arg Asn Val Leu Val
 755 760 765
 Asp Ser Asn Leu Val Cys Lys Val Ser Asp Phe Gly Leu Ser Arg Val
 770 775 780
 Leu Glu Asp Asp Pro Asp Ala Ala Tyr Thr Thr Thr Gly Gly Lys Ile
 785 790 795 800
 Pro Ile Arg Trp Thr Ala Pro Glu Ala Ile Ala Phe Arg Thr Phe Ser
 805 810 815
 Ser Ala Ser Asp Val Trp Ser Phe Gly Val Val Met Trp Glu Val Leu
 820 825 830
 Ala Tyr Gly Glu Arg Pro Tyr Trp Asn Met Thr Asn Arg Asp Val Ile
 835 840 845
 Ser Ser Val Glu Glu Gly Tyr Arg Leu Pro Ala Pro Met Gly Cys Pro
 850 855 860
 His Ala Leu His Gln Leu Met Leu Asp Cys Trp His Lys Asp Arg Ala
 865 870 875 880
 Gln Arg Pro Arg Phe Ser Gln Ile Val Ser Val Leu Asp Ala Leu Ile
 885 890 895
 Arg Ser Pro Glu Ser Leu Arg Ala Thr Ala Thr Val Ser Arg Cys Pro
 900 905 910

Pro Pro Ala Phe Val Arg Ser Cys Phe Asp Leu Arg Gly Gly Ser Gly
 915 920 925
 Gly Gly Gly Gly Leu Thr Val Gly Asp Trp Leu Asp Ser Ile Arg Met
 930 935 940
 Gly Arg Tyr Arg Asp His Phe Ala Ala Gly Gly Tyr Ser Ser Leu Gly
 945 950 955 960
 Met Val Leu Arg Met Asn Ala Gln Asp Val Arg Ala Leu Gly Ile Thr
 965 970 975
 Leu Met Gly His Gln Lys Lys Ile Leu Gly Ser Ile Gln Thr Met Arg
 980 985 990

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 <211> 450
 <212> PRT
 <213> Mus musculus

<400> 54
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 Ala Ala Ala Ala Ala Thr Cys Val Ser Ala Gly Arg Gly Glu Val Asn
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 Leu Leu Asp Thr Ser Thr Ile His Gly Asp Trp Gly Trp Leu Thr Tyr
 35 40 45
 Pro Ala His Gly Trp Asp Ser Ile Asn Glu Val Asp Glu Ser Phe Arg
 50 55 60
 Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln Asn
 65 70 75 80
 Asn Trp Leu Arg Thr Asn Trp Val Pro Arg Asp Gly Ala Arg Arg Val
 85 90 95
 Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Ile Pro Gly
 100 105 110
 Val Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu His Tyr Leu Glu Ser
 115 120 125
 Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu Ser Gln Phe Leu Lys Ile
 130 135 140
 Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gly Ala Asp Leu Gly Val
 145 150 155 160
 Arg Arg Leu Lys Leu Asn Thr Glu Val Arg Gly Val Gly Pro Leu Ser
 165 170 175
 Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Leu Ala
 180 185 190
 Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys Cys Pro Ala Met Val Arg
 195 200 205
 Asn Leu Ala Ala Phe Ser Glu Ala Val Thr Gly Ala Asp Ser Ser Ser
 210 215 220

Leu Val Glu Val Arg Gly Gln Cys Val Arg His Ser Glu Glu Arg Asp
 225 230 235 240
 Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro Ile
 245 250 255
 Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala Cys
 260 265 270
 Met Ala Cys Glu Leu Gly Phe Tyr Lys Ser Ala Pro Gly Asp Gln Leu
 275 280 285
 Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Thr Pro Ala Ala Gln
 290 295 300
 Thr Cys Arg Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro Pro
 305 310 315 320
 Ser Ala Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile Ser
 325 330 335
 Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu Asp
 340 345 350
 Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn Ala Val Cys Arg Arg Cys
 355 360 365
 Pro Trp Ala Leu Ser His Cys Glu Ala Cys Gly Ser Gly Thr Arg Phe
 370 375 380
 Val Pro Gln Gln Thr Ser Leu Ala Gln Ala Ser Leu Leu Val Ala Asn
 385 390 395 400
 Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn Gly
 405 410 415
 Val Ser Asn Leu Ser Pro Glu Pro Arg Ser Ala Ala Val Val Asn Ile
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 Thr Thr Asn Gln Ala Ala Pro Ser Gln Val Val Val Ile Arg Gln Glu
 435 440 445
 Arg Ala
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<210> 55
 <211> 480
 <212> PRT
 <213> Homo sapiens

<400> 55
 Met Arg Gly Ser Gly Pro Arg Gly Ala Gly His Arg Arg Pro Pro Ser
 1 5 10 15
 Gly Gly Gly Asp Thr Pro Ile Thr Pro Ala Ser Leu Ala Gly Cys Tyr
 20 25 30
 Ser Ala Pro Arg Arg Ala Pro Leu Trp Thr Cys Leu Leu Leu Cys Ala
 35 40 45
 Ala Leu Arg Thr Leu Leu Ala Ser Pro Ser Asn Glu Val Asn Leu Leu
 26

50					55					60					
Asp 65	Ser	Arg	Thr	Val	Met 70	Gly	Asp	Leu	Gly	Trp 75	Ile	Ala	Phe	Pro	Lys 80
Asn	Gly	Trp	Glu	Glu 85	Ile	Gly	Glu	Val	Asp 90	Glu	Asn	Tyr	Ala	Pro	Ile 95
His	Thr	Tyr	Gln 100	Val	Cys	Lys	Val	Met 105	Glu	Gln	Asn	Gln	Asn	Asn	Trp 110
Leu	Leu	Thr	Ser	Trp	Ile	Ser	Asn 120	Glu	Gly	Ala	Ser	Arg	Ile	Phe	Ile 125
Glu 130	Leu	Lys	Phe	Thr	Leu	Arg 135	Asp	Cys	Asn	Ser	Leu 140	Pro	Gly	Gly	Leu
Gly 145	Thr	Cys	Lys	Glu	Thr 150	Phe	Asn	Met	Tyr	Tyr 155	Phe	Glu	Ser	Asp	Asp 160
Gln	Asn	Gly	Arg	Asn 165	Ile	Lys	Glu	Asn	Gln 170	Tyr	Ile	Lys	Ile	Asp	Thr 175
Ile	Ala	Ala	Asp 180	Glu	Ser	Phe	Thr	Glu 185	Leu	Asp	Leu	Gly	Asp	Arg	Val 190
Met	Lys	Leu 195	Asn	Thr	Glu	Val	Arg 200	Asp	Val	Gly	Pro	Leu	Ser	Lys	Lys 205
Gly 210	Phe	Tyr	Leu	Ala	Phe	Gln 215	Asp	Val	Gly	Ala	Cys 220	Ile	Ala	Leu	Val
Ser 225	Val	Arg	Val	Tyr	Tyr 230	Lys	Lys	Cys	Pro	Ser 235	Val	Val	Arg	His	Leu 240
Ala	Val	Phe	Pro	Asp 245	Thr	Ile	Thr	Gly	Ala 250	Asp	Ser	Ser	Gln	Leu	Leu 255
Glu	Val	Ser	Gly 260	Ser	Cys	Val	Asn 265	His	Ser	Val	Thr	Asp	Glu	Pro	Pro 270
Lys	Met	His	Cys	Ser	Ala	Glu	Gly 280	Glu	Trp	Leu	Val	Pro 285	Ile	Gly	Lys
Cys 290	Met	Cys	Lys	Ala	Gly 295	Tyr	Glu	Glu	Lys	Asn 300	Gly	Thr	Cys	Gln	Val
Cys 305	Arg	Pro	Gly	Phe	Phe 310	Lys	Ala	Ser	Pro	His 315	Ile	Gln	Ser	Cys	Gly 320
Lys	Cys	Pro	Pro	His 325	Ser	Tyr	Thr	His	Glu 330	Glu	Ala	Ser	Thr	Ser	Cys 335
Val	Cys	Glu	Lys 340	Asp	Tyr	Phe	Arg	Arg 345	Glu	Ser	Asp	Pro	Pro	Thr	Met 350
Ala	Cys	Thr	Arg	Pro	Pro	Ser	Ala 360	Pro	Arg	Asn	Ala	Ile	Ser	Asn	Val 365
Asn 370	Glu	Thr	Ser	Val	Phe	Leu	Glu 375	Trp	Ile	Pro	Pro	Ala	Asp	Thr	Gly 380
Gly	Arg	Lys	Asp	Val	Ser	Tyr	Tyr	Ile	Ala	Cys	Lys	Lys	Cys	Asn	Ser

385		390		395		400
His Ala Gly Val Cys Glu Glu Cys Gly Gly His Val Arg Tyr Leu Pro						
	405			410		415
Arg Gln Ser Gly Leu Lys Asn Thr Ser Val Met Met Val Asp Leu Leu						
	420			425		430
Ala His Thr Asn Tyr Thr Phe Glu Ile Glu Ala Val Asn Gly Val Ser						
	435			440		445
Asp Leu Ser Pro Gly Ala Arg Gln Tyr Val Ser Val Asn Val Thr Thr						
	450			455		460
Asn Gln Ala Ala Pro Ser Pro Val Thr Asn Val Lys Lys Gly Lys Ile						
465		470		475		480

<210> 56

<211> 456

<212> PRT

<213> Gallus gallus

<400> 56

Met Gly Leu Arg Gly Gly Gly Gly Arg Ala Gly Gly Pro Ala Pro Gly																			
1				5				10									15		
Trp Thr Cys Leu Leu Leu Cys Ala Ala Leu Arg Ser Leu Leu Ala Ser																			
			20					25									30		
Pro Gly Ser Glu Val Asn Leu Leu Asp Ser Arg Thr Val Met Gly Asp																			
			35					40									45		
Leu Gly Trp Ile Ala Tyr Pro Lys Asn Gly Trp Glu Glu Ile Gly Glu																			
			50					55									60		
Val Asp Glu Asn Tyr Ala Pro Ile His Thr Tyr Gln Val Cys Lys Val																			
			65					70									75		80
Met Glu Gln Asn Gln Asn Asn Trp Leu Leu Thr Ser Trp Ile Ser Asn																			
								85									90		95
Glu Gly Arg Pro Ala Ser Ser Phe Glu Leu Lys Phe Thr Leu Arg Asp																			
			100														105		110
Cys Asn Ser Leu Pro Gly Gly Leu Gly Thr Cys Lys Glu Thr Phe Asn																			
			115														120		125
Met Tyr Tyr Phe Glu Ser Asp Asp Glu Asp Gly Arg Asn Ile Arg Glu																			
			130														135		140
Asn Gln Tyr Ile Lys Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr																			
			145														150		155
Glu Leu Asp Leu Gly Asp Arg Val Met Lys Leu Asn Thr Glu Val Arg																			
																	165		170
Asp Val Gly Pro Leu Thr Lys Lys Gly Phe Tyr Leu Ala Phe Gln Asp																			
			180																185
Val Gly Ala Cys Ile Ala Leu Val Ser Val Arg Val Tyr Tyr Lys Lys																			
			195																200
																			205

Cys Pro Ser Val Ile Arg Asn Leu Ala Arg Phe Pro Asp Thr Ile Thr
 210 215 220
 Gly Ala Asp Ser Ser Gln Leu Leu Glu Val Ser Gly Val Cys Val Asn
 225 230 235 240
 His Ser Val Thr Asp Glu Ala Pro Lys Met His Cys Ser Ala Glu Gly
 245 250 255
 Glu Trp Leu Val Pro Ile Gly Lys Cys Leu Cys Lys Ala Gly Tyr Glu
 260 265 270
 Glu Lys Asn Asn Thr Cys Gln Val Cys Arg Pro Gly Phe Phe Lys Ala
 275 280 285
 Ser Pro His Ser Pro Ser Cys Ser Lys Cys Pro Pro His Ser Tyr Thr
 290 295 300
 Leu Asp Glu Ala Ser Thr Ser Cys Leu Cys Glu Glu His Tyr Phe Arg
 305 310 315 320
 Arg Glu Ser Asp Pro Pro Thr Met Ala Cys Thr Arg Pro Pro Ser Ala
 325 330 335
 Pro Arg Ser Ala Ile Ser Asn Val Asn Glu Thr Ser Val Phe Leu Glu
 340 345 350
 Trp Ile Pro Pro Ala Asp Thr Gly Gly Arg Lys Asp Val Ser Tyr Tyr
 355 360 365
 Ile Ala Cys Lys Lys Cys Asn Ser His Ser Gly Leu Cys Glu Ala Cys
 370 375 380
 Gly Ser His Val Arg Tyr Leu Pro Gln Gln Thr Gly Leu Lys Asn Thr
 385 390 395 400
 Ser Val Met Met Val Asp Leu Leu Ala His Thr Asn Tyr Thr Phe Glu
 405 410 415
 Ile Glu Ala Val Asn Gly Val Ser Asp Gln Asn Pro Gly Ala Arg Gln
 420 425 430
 Phe Val Ser Val Asn Val Thr Thr Asn Gln Ala Ala Pro Ser Pro Val
 435 440 445
 Ser Ser Val Lys Lys Gly Lys Ile
 450 455

<210> 57
 <211> 649
 <212> PRT
 <213> Homo sapiens

<400> 57
 Met Ile Ser Ala Ala Trp Ser Ile Phe Leu Ile Gly Thr Lys Ile Gly
 1 5 10 15
 Leu Phe Leu Gln Val Ala Pro Leu Ser Val Met Ala Lys Ser Cys Pro
 20 25 30
 Ser Val Cys Arg Cys Asp Ala Gly Phe Ile Tyr Cys Asn Asp Arg Phe
 29

35

40

45

Leu Thr Ser Ile Pro Thr Gly Ile Pro Glu Asp Ala Thr Thr Leu Tyr
 50 55 60
 Leu Gln Asn Asn Gln Ile Asn Asn Ala Gly Ile Pro Ser Asp Leu Lys
 65 70 75 80
 Asn Leu Leu Lys Val Glu Arg Ile Tyr Leu Tyr His Asn Ser Leu Asp
 85 90 95
 Glu Phe Pro Thr Asn Leu Pro Lys Tyr Val Lys Glu Leu His Leu Gln
 100 105 110
 Glu Asn Asn Ile Arg Thr Ile Thr Tyr Asp Ser Leu Ser Lys Ile Pro
 115 120 125
 Tyr Leu Glu Glu Leu His Leu Asp Asp Asn Ser Val Ser Ala Val Ser
 130 135 140
 Ile Glu Glu Gly Ala Phe Arg Asp Ser Asn Tyr Leu Arg Leu Leu Phe
 145 150 155 160
 Leu Ser Arg Asn His Leu Ser Thr Ile Pro Trp Gly Leu Pro Arg Thr
 165 170 175
 Ile Glu Glu Leu Arg Leu Asp Asp Asn Arg Ile Ser Thr Ile Ser Ser
 180 185 190
 Pro Ser Leu Gln Gly Leu Thr Ser Leu Lys Arg Leu Val Leu Asp Gly
 195 200 205
 Asn Leu Leu Asn Asn His Gly Leu Gly Asp Lys Val Phe Phe Asn Leu
 210 215 220
 Val Asn Leu Thr Glu Leu Ser Leu Val Arg Asn Ser Leu Thr Ala Ala
 225 230 235 240
 Pro Val Asn Leu Pro Gly Thr Asn Leu Arg Lys Leu Tyr Leu Gln Asp
 245 250 255
 Asn His Ile Asn Arg Val Pro Pro Asn Ala Phe Ser Tyr Leu Arg Gln
 260 265 270
 Leu Tyr Arg Leu Asp Met Ser Asn Asn Asn Leu Ser Asn Leu Pro Gln
 275 280 285
 Gly Ile Phe Asp Asp Leu Asp Asn Ile Thr Gln Leu Ile Leu Arg Asn
 290 295 300
 Asn Pro Trp Tyr Cys Gly Cys Lys Met Lys Trp Val Arg Asp Trp Leu
 305 310 315 320
 Gln Ser Leu Pro Val Lys Val Asn Val Arg Gly Leu Met Cys Gln Ala
 325 330 335
 Pro Glu Lys Val Arg Gly Met Ala Ile Lys Asp Leu Asn Ala Glu Leu
 340 345 350
 Phe Asp Cys Lys Asp Ser Gly Ile Val Ser Thr Ile Gln Ile Thr Thr
 355 360 365
 Ala Ile Pro Asn Thr Val Tyr Pro Ala Gln Gly Gln Trp Pro Ala Pro

370	375	380
Val Thr Lys Gln Pro Asp Ile Lys Asn Pro Lys Leu Thr Lys Asp His		
385	390	395 400
Gln Thr Thr Gly Ser Pro Ser Arg Lys Thr Ile Thr Ile Thr Val Lys		
	405	410 415
Ser Val Thr Ser Asp Thr Ile His Ile Ser Trp Lys Leu Ala Leu Pro		
	420	425 430
Met Thr Ala Leu Arg Leu Ser Trp Leu Lys Leu Gly His Ser Pro Ala		
	435	440 445
Phe Gly Ser Ile Thr Glu Thr Ile Val Thr Gly Glu Arg Ser Glu Tyr		
	450	455 460
Leu Val Thr Ala Leu Glu Pro Asp Ser Pro Tyr Lys Val Cys Met Val		
	465	470 475 480
Pro Met Glu Thr Ser Asn Leu Tyr Leu Phe Asp Glu Thr Pro Val Cys		
	485	490 495
Ile Glu Thr Glu Thr Ala Pro Leu Arg Met Tyr Asn Pro Thr Thr Thr		
	500	505 510
Leu Asn Arg Glu Gln Glu Lys Glu Pro Tyr Lys Asn Pro Asn Leu Pro		
	515	520 525
Leu Ala Ala Ile Ile Gly Gly Ala Val Ala Leu Val Thr Ile Ala Leu		
	530	535 540
Leu Ala Leu Val Cys Trp Tyr Val His Arg Asn Gly Ser Leu Phe Ser		
	545	550 555 560
Arg Asn Cys Ala Tyr Ser Lys Gly Arg Arg Arg Lys Asp Asp Tyr Ala		
	565	570 575
Glu Ala Gly Thr Lys Lys Asp Asn Ser Ile Leu Glu Ile Arg Glu Thr		
	580	585 590
Ser Phe Gln Met Leu Pro Ile Ser Asn Glu Pro Ile Ser Lys Glu Glu		
	595	600 605
Phe Val Ile His Thr Ile Phe Pro Pro Asn Gly Met Asn Leu Tyr Lys		
	610	615 620
Asn Asn His Ser Glu Ser Ser Ser Asn Arg Ser Tyr Arg Asp Ser Gly		
	625	630 635 640
Ile Pro Asp Ser Asp His Ser His Ser		
	645	

<210> 58

<211> 660

<212> PRT

<213> Homo sapiens

<400> 58

Met Gly Leu Gln Thr Thr Lys Trp Pro Ser His Gly Ala Phe Phe Leu

1

5

10

15

Lys Ser Trp Leu Ile Ile Ser Leu Gly Leu Tyr Ser Gln Val Ser Lys
 20 25 30
 Leu Leu Ala Cys Pro Ser Val Cys Arg Cys Asp Arg Asn Phe Val Tyr
 35 40 45
 Cys Asn Glu Arg Ser Leu Thr Ser Val Pro Leu Gly Ile Pro Glu Gly
 50 55 60
 Val Thr Val Leu Tyr Leu His Asn Asn Gln Ile Asn Asn Ala Gly Phe
 65 70 75 80
 Pro Ala Glu Leu His Asn Val Gln Ser Val His Thr Val Tyr Leu Tyr
 85 90 95
 Gly Asn Gln Leu Asp Glu Phe Pro Met Asn Leu Pro Lys Asn Val Arg
 100 105 110
 Val Leu His Leu Gln Glu Asn Asn Ile Gln Thr Ile Ser Arg Ala Ala
 115 120 125
 Leu Ala Gln Leu Leu Lys Leu Glu Glu Leu His Leu Asp Asp Asn Ser
 130 135 140
 Ile Ser Thr Val Gly Val Glu Asp Gly Ala Phe Arg Glu Ala Ile Ser
 145 150 155 160
 Leu Lys Leu Leu Phe Leu Ser Lys Asn His Leu Ser Ser Val Pro Val
 165 170 175
 Gly Leu Pro Val Asp Leu Gln Glu Leu Arg Val Asp Glu Asn Arg Ile
 180 185 190
 Ala Val Ile Ser Asp Met Ala Phe Gln Asn Leu Thr Ser Leu Glu Arg
 195 200 205
 Leu Ile Val Asp Gly Asn Leu Leu Thr Asn Lys Gly Ile Ala Glu Gly
 210 215 220
 Thr Phe Ser His Leu Thr Lys Leu Lys Glu Phe Ser Ile Val Arg Asn
 225 230 235 240
 Ser Leu Ser His Pro Pro Pro Asp Leu Pro Gly Thr His Leu Ile Arg
 245 250 255
 Leu Tyr Leu Gln Asp Asn Gln Ile Asn His Ile Pro Leu Thr Ala Phe
 260 265 270
 Ser Asn Leu Arg Lys Leu Glu Arg Leu Asp Ile Ser Asn Asn Gln Leu
 275 280 285
 Arg Met Leu Thr Gln Gly Val Phe Asp Asn Leu Ser Asn Leu Lys Gln
 290 295 300
 Leu Thr Ala Arg Asn Asn Pro Trp Phe Cys Asp Cys Ser Ile Lys Trp
 305 310 315 320
 Val Thr Glu Trp Leu Lys Tyr Ile Pro Ser Ser Leu Asn Val Arg Gly
 325 330 335
 Phe Met Cys Gln Gly Pro Glu Gln Val Arg Gly Met Ala Val Arg Glu
 340 345 350

Leu	Asn	Met	Asn	Leu	Leu	Ser	Cys	Pro	Thr	Thr	Thr	Pro	Gly	Leu	Pro	355	360	365
Leu	Phe	Thr	Pro	Ala	Pro	Ser	Thr	Ala	Ser	Pro	Thr	Thr	Gln	Pro	Pro	370	375	380
Thr	Leu	Ser	Ile	Pro	Asn	Pro	Ser	Arg	Ser	Tyr	Thr	Pro	Pro	Thr	Pro	385	390	395
Thr	Thr	Ser	Lys	Leu	Pro	Thr	Ile	Pro	Asp	Trp	Asp	Gly	Arg	Glu	Arg	405	410	415
Val	Thr	Pro	Pro	Ile	Ser	Glu	Arg	Ile	Gln	Leu	Ser	Ile	His	Phe	Val	420	425	430
Asn	Asp	Thr	Ser	Ile	Gln	Val	Ser	Trp	Leu	Ser	Leu	Phe	Thr	Val	Met	435	440	445
Ala	Tyr	Lys	Leu	Thr	Trp	Val	Lys	Met	Gly	His	Ser	Leu	Val	Gly	Gly	450	455	460
Ile	Val	Gln	Glu	Arg	Ile	Val	Ser	Gly	Glu	Lys	Gln	His	Leu	Ser	Leu	465	470	475
Val	Asn	Leu	Glu	Pro	Arg	Ser	Thr	Tyr	Arg	Ile	Cys	Leu	Val	Pro	Leu	485	490	495
Asp	Ala	Phe	Asn	Tyr	Arg	Ala	Val	Glu	Asp	Thr	Ile	Cys	Ser	Glu	Ala	500	505	510
Thr	Thr	His	Ala	Ser	Tyr	Leu	Asn	Asn	Gly	Ser	Asn	Thr	Ala	Ser	Ser	515	520	525
His	Glu	Gln	Thr	Thr	Ser	His	Ser	Met	Gly	Ser	Pro	Phe	Leu	Leu	Ala	530	535	540
Gly	Leu	Ile	Gly	Gly	Ala	Val	Ile	Phe	Val	Leu	Val	Val	Leu	Leu	Ser	545	550	555
Val	Phe	Cys	Trp	His	Met	His	Lys	Lys	Gly	Arg	Tyr	Thr	Ser	Gln	Lys	565	570	575
Trp	Lys	Tyr	Asn	Arg	Gly	Arg	Arg	Lys	Asp	Asp	Tyr	Cys	Glu	Ala	Gly	580	585	590
Thr	Lys	Lys	Asp	Asn	Ser	Ile	Leu	Glu	Met	Thr	Glu	Thr	Ser	Phe	Gln	595	600	605
Ile	Val	Ser	Leu	Asn	Asn	Asp	Gln	Leu	Leu	Lys	Gly	Asp	Phe	Arg	Leu	610	615	620
Gln	Pro	Ile	Tyr	Thr	Pro	Asn	Gly	Gly	Ile	Asn	Tyr	Thr	Asp	Cys	His	625	630	635
Ile	Pro	Asn	Asn	Met	Arg	Tyr	Cys	Asn	Ser	Ser	Val	Pro	Asp	Leu	Glu	645	650	655
His	Cys	His	Thr													660		

<210> 59
<211> 674

<212> PRT

<213> Homo sapiens

<400> 59

Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
1 5 10 15

Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
20 25 30

Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
35 40 45

Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
50 55 60

Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
65 70 75 80

Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
85 90 95

Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
100 105 110

Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
115 120 125

Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
130 135 140

Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
145 150 155 160

Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
165 170 175

Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
180 185 190

Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
195 200 205

Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
210 215 220

Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
225 230 235 240

Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
245 250 255

Arg Asn Ser Leu Ala Ala Pro Pro Leu Asn Leu Pro Ser Ala His Leu
260 265 270

Gln Lys Leu Tyr Leu Gln Asp Asn Ala Ile Ser His Ile Pro Tyr Asn
275 280 285

Thr Leu Ala Lys Met Arg Glu Leu Glu Arg Leu Asp Leu Ser Asn Asn
290 295 300

Asn Leu Thr Thr Leu Pro Arg Gly Leu Phe Asp Asp Leu Gly Asn Leu
305 310 315 320

Ala Gln Leu Leu Leu Arg Asn Asn Pro Trp Phe Cys Gly Cys Asn Leu
 325 330 335
 Met Trp Leu Arg Asp Trp Val Lys Ala Arg Ala Ala Val Val Asn Val
 340 345 350
 Arg Gly Leu Met Cys Gln Gly Pro Glu Lys Val Arg Gly Met Ala Ile
 355 360 365
 Lys Asp Ile Thr Ser Glu Met Asp Glu Cys Phe Glu Thr Gly Pro Gln
 370 375 380
 Gly Gly Val Ala Asn Ala Ala Ala Lys Thr Thr Ala Ser Asn His Ala
 385 390 395 400
 Ser Ala Thr Thr Pro Gln Gly Ser Leu Phe Thr Leu Lys Ala Lys Arg
 405 410 415
 Pro Gly Leu Arg Leu Pro Asp Ser Asn Ile Asp Tyr Pro Met Ala Thr
 420 425 430
 Gly Asp Gly Ala Lys Thr Leu Ala Ile His Val Lys Ala Leu Thr Ala
 435 440 445
 Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr Leu Pro Ala Ser Ser Phe
 450 455 460
 Arg Leu Ser Trp Leu Arg Leu Gly His Ser Pro Ala Val Gly Ser Ile
 465 470 475 480
 Thr Glu Thr Leu Val Gln Gly Asp Lys Thr Glu Tyr Leu Leu Thr Ala
 485 490 495
 Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys Met Val Thr Met Glu Thr
 500 505 510
 Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro Val Cys Ala Lys Ala Glu
 515 520 525
 Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr Leu Asn Gln Glu Gln Asn
 530 535 540
 Ala Gly Pro Met Ala Ser Leu Pro Leu Ala Gly Ile Ile Gly Gly Ala
 545 550 555 560
 Val Ala Leu Val Phe Leu Phe Leu Val Leu Gly Ala Ile Cys Trp Tyr
 565 570 575
 Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg Ala Tyr Asn Arg
 580 585 590
 Gly Ser Arg Glu Lys Asp Asp Tyr Met Glu Ser Gly Thr Lys Lys Asp
 595 600 605
 Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln Met Leu Pro Ile
 610 615 620
 Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His Thr Ile Phe Pro
 625 630 635 640
 Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr Ile Gly Tyr Gly
 645 650 655

Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp Ile Asp Tyr Ser
660 665 670

Tyr Thr

<210> 60
<211> 674
<212> PRT
<213> Homo sapiens

<400> 60

Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
1 5 10 15

Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
20 25 30

Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
35 40 45

Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
50 55 60

Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
65 70 75 80

Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
85 90 95

Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
100 105 110

Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
115 120 125

Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
130 135 140

Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
145 150 155 160

Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
165 170 175

Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
180 185 190

Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
195 200 205

Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
210 215 220

Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
225 230 235 240

Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
245 250 255

Arg Asn Ser Leu Ala Ala Pro Pro Leu Asn Leu Pro Ser Ala His Leu

595 600 605
 Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln Met Leu Pro Ile
 610 615 620
 Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His Thr Ile Phe Pro
 625 630 635 640
 Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr Ile Gly Tyr Gly
 645 650 655
 Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp Ile Asp Tyr Ser
 660 665 670
 Tyr Thr

<210> 61
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 61
 Pro Met Ala Thr Gly Asp Gly Ala Lys Thr Leu Ala Ile His Val Lys
 1 5 10 15
 Ala Leu Thr Ala Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr Leu Pro
 20 25 30
 Ala Ser Ser Phe Arg Leu Ser Trp Leu Arg Leu Gly His Ser Pro Ala
 35 40 45
 Val Gly Ser Ile Thr Glu Thr Leu Val Gln Gly Asp Lys Thr Glu Tyr
 50 55 60
 Leu Leu Thr Ala Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys Met Val
 65 70 75 80
 Thr Met Glu Thr Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro Val Cys
 85 90 95
 Ala Lys Ala Glu Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr Leu Asn
 100 105 110
 Gln Glu Gln Asn Ala Gly Pro Met Ala Ser Leu Pro Leu Ala Gly Ile
 115 120 125
 Ile Gly Gly Ala Val Ala Leu Val Phe Leu Phe Leu Val Leu Gly Ala
 130 135 140
 Ile Cys Trp Tyr Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg
 145 150 155 160
 Ala Tyr Asn Arg Gly Ser Arg Lys Lys Asp Asp Tyr Met Glu Ser Gly
 165 170 175
 Thr Lys Lys Asp Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln
 180 185 190
 Met Leu Pro Ile Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His
 195 200 205

Thr Ile Phe Pro Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr
 210 215 220

Ile Gly Tyr Gly Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp
 225 230 235 240

Ile Asp Tyr Ser Tyr Thr
 245

<210> 62
 <211> 378
 <212> PRT
 <213> Homo sapiens

<400> 62
 Ile Ser Asn Asn Gln Leu Arg Met Leu Thr Gln Gly Val Phe Asp Asn
 1 5 10 15

Leu Ser Asn Leu Lys Gln Leu Thr Ala Arg Asn Asn Pro Trp Phe Cys
 20 25 30

Asp Cys Ser Ile Lys Trp Val Thr Glu Trp Leu Lys Tyr Ile Pro Ser
 35 40 45

Ser Leu Asn Val Arg Gly Phe Met Cys Gln Gly Pro Glu Gln Val Arg
 50 55 60

Gly Met Ala Val Arg Glu Leu Asn Met Asn Leu Leu Ser Cys Pro Thr
 65 70 75 80

Thr Thr Pro Gly Leu Pro Leu Phe Thr Pro Ala Pro Ser Thr Ala Ser
 85 90 95

Pro Thr Thr Gln Pro Pro Thr Leu Ser Ile Pro Asn Pro Ser Arg Ser
 100 105 110

Tyr Thr Pro Pro Thr Pro Thr Thr Ser Lys Leu Pro Thr Ile Pro Asp
 115 120 125

Trp Asp Gly Arg Glu Arg Val Thr Pro Pro Ile Ser Glu Arg Ile Gln
 130 135 140

Leu Ser Ile His Phe Val Asn Asp Thr Ser Ile Gln Val Ser Trp Leu
 145 150 155 160

Ser Leu Phe Thr Val Met Ala Tyr Lys Leu Thr Trp Val Lys Met Gly
 165 170 175

His Ser Leu Val Gly Gly Ile Val Gln Glu Arg Ile Val Ser Gly Glu
 180 185 190

Lys Gln His Leu Ser Leu Val Asn Leu Glu Pro Arg Ser Thr Tyr Arg
 195 200 205

Ile Cys Leu Val Pro Leu Asp Ala Phe Asn Tyr Arg Ala Val Glu Asp
 210 215 220

Thr Ile Cys Ser Glu Ala Thr Thr His Ala Ser Tyr Leu Asn Asn Gly
 225 230 235 240

Ser Asn Thr Ala Ser Ser His Glu Gln Thr Thr Ser His Ser Met Gly
 245 250 255

Ser Pro Phe Leu Leu Ala Gly Leu Ile Gly Gly Ala Val Ile Phe Val
 260 265 270
 Leu Val Val Leu Leu Ser Val Phe Cys Trp His Met His Lys Lys Gly
 275 280 285
 Arg Tyr Thr Ser Gln Lys Trp Lys Tyr Asn Arg Gly Arg Arg Lys Asp
 290 295 300
 Asp Tyr Cys Glu Ala Gly Thr Lys Lys Asp Asn Ser Ile Leu Glu Met
 305 310 315 320
 Thr Glu Thr Ser Phe Gln Ile Val Ser Leu Asn Asn Asp Gln Leu Leu
 325 330 335
 Lys Gly Asp Phe Arg Leu Gln Pro Ile Tyr Thr Pro Asn Gly Gly Ile
 340 345 350
 Asn Tyr Thr Asp Cys His Ile Pro Asn Asn Met Arg Tyr Cys Asn Ser
 355 360 365
 Ser Val Pro Asp Leu Glu His Cys His Thr
 370 375

<210> 63
 <211> 338
 <212> PRT
 <213> Gallus gallus

<400> 63
 Val His Ser Val Trp Thr Arg Thr Val Arg Gln Val Tyr Asn Glu Leu
 1 5 10 15
 Asp Pro Glu His Trp Ser His Tyr Thr Phe Glu Cys Pro Gln Glu Cys
 20 25 30
 Phe Cys Pro Pro Ser Phe Pro Asn Ala Leu Tyr Cys Asp Asn Lys Gly
 35 40 45
 Leu Lys Glu Ile Pro Ala Ile Pro Ala Arg Ile Trp Tyr Leu Tyr Leu
 50 55 60
 Gln Asn Asn Leu Ile Glu Thr Ile Ser Glu Lys Pro Phe Val Asn Ala
 65 70 75 80
 Thr His Leu Arg Trp Ile Asn Leu Asn Lys Asn Lys Ile Thr Asn Asn
 85 90 95
 Gly Ile Glu Ser Gly Val Leu Ser Lys Leu Lys Arg Leu Leu Tyr Leu
 100 105 110
 Phe Leu Glu Asp Asn Glu Leu Glu Glu Val Pro Ala Pro Leu Pro Val
 115 120 125
 Gly Leu Glu Gln Leu Arg Leu Ala Arg Asn Lys Ile Ser Arg Ile Pro
 130 135 140
 Glu Gly Val Phe Ser Asn Leu Glu Asn Leu Thr Met Leu Asp Leu His
 145 150 155 160
 Gln Asn Asn Leu Leu Asp Ser Ala Leu Gln Ser Asp Thr Phe Gln Gly

Leu Asp His Asn His Leu Thr Arg Ile Pro Ser Pro Leu Pro Arg Ser
 115 120 125
 Leu Arg Glu Leu His Leu Asp His Asn Gln Ile Ser Arg Val Pro Asn
 130 135 140
 Asn Ala Leu Glu Gly Leu Glu Asn Leu Thr Ala Leu Tyr Leu His His
 145 150 155 160
 Glu Ile Gln Glu Val Gly Ser Ser Met Lys Gly Leu Arg Ser Leu Ile
 165 170 175
 Leu Leu Asp Leu Ser Tyr Asn His Leu Arg Lys Val Pro Asp Gly Leu
 180 185 190
 Pro Ser Ala Leu Glu Gln Leu Tyr Leu Glu His Asn Asn Val Phe Ser
 195 200 205
 Val Pro Asp Ser Tyr Phe Arg Gly Ser Pro Lys Leu Leu Tyr Val Arg
 210 215 220
 Leu Ser His Asn Ser Leu Thr Asn Asn Gly Leu Ala Ser Asn Thr Phe
 225 230 235 240
 Asn Ser Ser Ser Leu Leu Glu Leu Asp Leu Ser Tyr Asn Gln Leu Gln
 245 250 255
 Lys Ile Pro Pro Val Ser Thr Asn Leu Glu Asn Leu Tyr Leu Gln Gly
 260 265 270
 Asn Arg Ile Asn Glu Phe Ser Ile Ser Ser Phe Cys Thr Val Val Asp
 275 280 285
 Val Met Asn Phe Ser Lys Leu Gln Val Gln Arg Leu Asp Gly Asn Glu
 290 295 300
 Ile Lys Arg Ser Ala Met Pro Ala Asp Ala Pro Leu Cys Leu Arg Leu
 305 310 315 320
 Ala Ser Leu Ile Glu Ile
 325